ABSTRACT OF THE DISCLOSURE

A method and signal processing apparatus for reducing the number of bits of a digital input signal (M_i), includes adding a

5   pseudo-random noise signal (N_a) to the digital input signal (M_i) to obtain an intermediate signal (D_i), the pseudo-random noise signal (N_a) being defined by noise parameters (N_p), and quantizing the intermediate signal (D_i), having a word length of n bits, to a reduced word-length signal (M_e) having a word length of m bits, n

10   being larger than or equal to m. The method further includes quantizing the intermediate signal (D_i) using a first transfer function which is non-linear, the first transfer function being defined by non-linear device parameters (NLD_p).